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COASTAL CITY ADAPTATION PROJECT (CCAP)

QUARTERLY TECHNICAL PROGRESS REPORT: JANUARY-MARCH
2016



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Contract No. AID-656-C14-00001

Cover photo: CCAP staff and technical from the Municipality of Pemba show their certificates after successfully completing the environmental compliance training. (Modesto Zumbire/Municipality of Pemba)

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ACRONYMS

ACCRA	Africa Climate Change Resilience Alliance
AIAS	Administration of Water Supply Infrastructure
AMA	Environment Association
CCA	Climate Change Adaptation
CCAP	Coastal City Adaptation Project
CVM	Red Cross of Mozambique (Cruz Vermelha de Moçambique)
DEPTADER	Provincial Directorate of Environment, Land and Rural Development
DRR	Disaster Risk Reduction
DINOTER	National Directorate of Land (Direcção Nacional de de Terra)
EMU-ESCMC	Eduardo Mondlane University's School of Marine and Coastal Sciences
EWS	Early Warning System
FIPAG	Water Supply Investment & Asset Holding Company
FFH	Funds for Housing Expansion
GoM	Government of Mozambique
INGC	National Disaster Management Institute (Instituto Nacional de Gestão de Calamidades)
LGSAT	UNISDR's Local Government Self-Assessment Tool
MoU	Memorandum of Understanding
MITADER	Ministry of Land, Environment and Rural Development (Ministério da Terra, Ambiente e Desenvolvimento Rural)
NGO	Non-Government Organization
PLA	Climate Change Local Adaptation Plans (Plano Local de Adaptação)
SIGIC	Integrated Disaster Information Management System (Sistema Integrado de Gestão de informação sobre Calamidades)
SIGIU	Integrated Urban Information Management System (Sistema Integrado de Gestão de informação Urbana)
Unilúrio	University of Lúrio
UEM	Eduardo Mondlane University (Universidade Eduardo Mondlane)
UN	United Nations

PROJECT DESCRIPTION

Project Duration	5 years
Starting Date	Contract signature - November 25, 2013 Start of operations - January 16, 2014
Life of Project Funding	US\$14,904,209

GEOGRAPHIC FOCUS

The Coastal City Adaptation Project (CCAP) is currently focusing its interventions in the vulnerable coastal cities of Pemba and Quelimane. Building on lessons learned in Pemba and Quelimane, CCAP is selecting interventions to implement in Nacala and is potentially scaling up a limited set of proven activities to additional cities along the Mozambican coast.

PROGRAM/PROJECT OBJECTIVES

The goal of CCAP is to increase climate resilience in selected Mozambican coastal cities through interventions aimed at achieving the three integrated objectives described below.

OBJECTIVE 1: IMPROVE THE PROVISION OF CLIMATE-RESILIENT URBAN SERVICES BY MUNICIPALITIES

The activities under Objective 1 focus on improving the capacity and technical skills of municipal authorities to plan, manage, and lead the execution of climate change adaptation (CCA) and disaster risk reduction (DRR) strategies. They also encompass participatory mechanisms for identifying and prioritizing adaptation options that combine technically credible and sound scientific analysis with engagement of vulnerable groups and communities in diagnosing problems and designing specific interventions to address those problems. This approach will help to ensure that the municipalities' CCA and DRR plans are technically reliable, responsive to local realities, and maximize the use of local resources for sustainability.

OBJECTIVE 2: INCREASE ADOPTION OF CLIMATE RESILIENCE MEASURES BY COMMUNITIES, CIVIC AND COMMUNITY ORGANIZATIONS, INCLUDING CIVIL SOCIETY, NGOS, AND FAITH-BASED ORGANIZATIONS

The activities under Objective 2 aim at increasing community resilience to climate change. They include assisting Mozambican educational institutions to establish enduring partnerships with centers of global climate change expertise; build networks and information platforms for knowledge generation and resource sharing; develop practical and cost-effective CCA and DRR options in cooperation with local stakeholders; and deliver trainings that equip individuals and community organizations with the skills to enhance resiliency in their local areas.

OBJECTIVE 3: INCREASE THE CAPACITY TO POTENTIALLY IMPLEMENT ECONOMIC RISK-MANAGEMENT TOOLS, SUCH AS INSURANCE PLANS

AND CONTINGENCY FUNDS, FOR AT-RISK URBAN INFRASTRUCTURE AND LIVELIHOODS

CCAP will initiate activities under Objective 3 during the current fiscal year with the purpose of creating an enabling environment for improved access to risk pooling measures, such as insurance products and contingency funds through broad engagement with relevant government and private sector actors. Initial activities will focus on assessing insurance options in Mozambique and identifying opportunities for establishing contingency funds and/or other relevant insurance products at the municipal level.

SUMMARY OF THE REPORTING PERIOD

HIGHLIGHTS

- Executed a memorandum of understanding (MoU) with the Municipality of Nacala to guide joint efforts to enhance the city's climate resilience and contribute to its socio-economic development.
- Provided counterparts and selected partners in both Pemba and Quelimane with comprehensive training on techniques, procedures, and internationally agreed upon standards for environment compliance and impact mitigation to ensure that project activities practice environmentally sound management and gather and assess information on the potential negative environmental impacts.
- Assessed the climate risks and housing situation in Pemba in collaboration with UN-Habitat. In Quelimane, resilient housing activities focused on the first steps to operationalize the housing designs, which consisted of discussions with local authorities and stakeholders on the city's climate change-related risks, resilient infrastructure typology, and criteria for siting the demonstration houses and for selecting beneficiaries.
- Assisted municipal officials in Pemba and Quelimane to finalize and prepare to submit local adaptation plans to their respective Municipal Assembly for formal approval.
- Through a subcontract with Eduardo Mondlane University (UEM), began a rapid assessment of green infrastructure in Pemba that CCAP will use to design future interventions.
- Supported the municipal authorities in Pemba to assess the use of the CCAP-supported Integrated Urban Information Management System (SIGIU), which resulted in an action plan focused on training up data senders in all neighborhoods and consolidating the use of the platform in the urbanization, finance and solid waste management sectors, and then expanding to the education, health, and gender sectors.



PHOTO: Gilberto Mual/CCAP

USAID/CCAP and Municipality of Nacala teams visit one of the most vulnerable areas to the effects of climate change in the city.

SIGNING MEMORANDUM OF UNDERSTANDING WITH NACALA TO ENHANCE ITS RESILIENCE TO CLIMATE CHANGE

After discussions between CCAP and the Municipality of Nacala to identify priority areas for collaboration, the two partners executed a MoU on March 10 to assist the Municipality's efforts to better deal with the impacts of climate

change, deliver more climate resilient services to its residents, and assist with the city's socio-economic development. As part of the MoU, CCAP will help Nacala to carry out a range of activities, such as: (i) conducting a comprehensive risk and vulnerability assessment to identify options for no-regret adaptive measures; (ii) implementing SIGIU, a soft engineering tool for the city's data collection and management; and (iii) providing targeted trainings to enhance local stakeholders' and decision makers' understanding of disaster risk management and CCA issues. The MoU clarifies the roles and responsibilities for these and other joint activities, which are based on CCAP's successful activities and lessons learned in Pemba and Quelimane.

ENVIRONMENT COMPLIANCE TRAINING IN PEMBA AND QUELIMANE

In late February and early March, CCAP conducted environment compliance training for staff, partners, relevant USAID implementers, and selected counterparts. The training aimed to increase understanding and adoption of international standards, norms, procedures, and best practices to mitigate potential negative environmental impacts on the basis of CCAP's Environmental Mitigation and Monitoring Plan (EMMP). CCAP fielded Environmental Compliance Specialist Lane Krahl to deliver the training, which focused on the practical application of the EMMP on green infrastructure, urban sanitation, rainwater harvesting and treatment, and urban solid waste management activities. In Pemba, participants included representatives from the Municipality, the Provincial Directorate of Environment, Land and Rural Development (DEPTADER), the Provincial Administration of Water Supply Infrastructure (AIAS), Water Supply Investment & Asset Holding Company (FIPAG), UniLúrio, Catholic University, and the Environment Association (AMA). In Quelimane participants included representatives from the



PHOTO: Abilio Cossa/CCAP

CCAP staff and Pemba municipal technicians examine sanitation issues during a field visit as part of environmental compliance training in the Paquitique neighborhood.

Municipality and various provincial organizations, as well as Water Aid, UEM School of Marine and Coastal Sciences (UEM-ESCMC), National Institute of Disaster Management (INGC), and Mozambique Red Cross (CVM).

The training provided participants with practical, step-by-step techniques and procedures for identifying negative environmental impacts, a methodology to design mitigation measures for the identified impacts, and a monitoring system to then track and ensure that activities do no harm the physical, social or biological components of the environment.



KICK-OFF FOR DEVELOPING MORE RESILIENT HOUSING IN QUELIMANE

In February a joint task team consisting of representatives from the Municipality, UN-Habitat, and CCAP conducted a field visit to Icídua and Manhaua in Quelimane to review the existing social and environmental conditions and assess the relevant climate change risks and vulnerabilities. In March, CCAP and UN-Habitat followed up the field visits with a working session in Icídua to discuss and pre-

Icídua community members in Quelimane learn about locally available residential construction materials that are more resilient to climate change.

validate the resilient housing principles and gather inputs to inform the housing prototype design. Representatives from the Municipality of Quelimane, local communities, women's groups, local construction firms, Funds for Housing Expansion (FFH) and the Provincial Directorate of Public Housing and Water Resources contributed during the session.

CCAP and UN-Habitat targeted these participants in order to help create an enabling environment for stakeholders to learn about the principles of resiliency and the basic techniques for building more resilient houses that are more capable of withstanding the impact of extreme weather events, such as cyclones, flooding, strong winds, as well as secondary events, such as landslide and erosion. At the workshop, participants reached consensus on the main criteria for housing design, site location, and beneficiary selection. CCAP clarified with municipal officials their role in providing the necessary legal permits required for construction and land use. Additionally, participants agreed on the main structural elements that best enhance the resilience of residential homes and provided wide-ranging inputs to inform initial designs of the model of the housing prototype, including desired amenities such as latrines and rainwater harvesting systems.

In the next stage, CCAP and UN-Habitat will focus on developing initial designs of model houses that local community members will then validate, before submitting to CCAP for external expert review in Washington, D.C. After expert review and feedback from USAID, UN-Habitat will proceed with the construction of 12 resilient

model housing. CCAP and UN-Habitat will use the same approach towards resilient housing work in Pemba, which will start in the next quarter.

SUBMISSION OF LOCAL ADAPTATION PLANS FOR MUNICIPAL ASSEMBLY APPROVAL

CCAP, together with ACCRA consortium member UEM, assisted the municipalities of Pemba and Quelimane in developing climate change local adaptation plans, which will serve as core tools for the municipalities enabling them to determine adaptive priorities for planning ways to address the anticipated impacts of climate change in a practical manner. Once formally approved, the plans will incorporate climate change adaptation concerns directly into the municipalities' sectors plans, land use management activities, and inform guide approaches to ecosystem service restoration and protection. During the reporting period, CCAP assisted the municipalities with final revisions. The municipalities then submitted the plans to their respective Municipal Assemblies for official approval, which is required before the municipalities can formally use the plans to guide planning of the prioritized adaptive measures. After approvals from the respective Assemblies, CCAP will assist the municipalities to implement selected measures.

RAPID ASSESSMENT OF EXISTING GREEN INFRASTRUCTURE IN PEMBA

CCAP subcontracted UEM to carry out a rapid assessment of existing and potential green infrastructure to assist Pemba in reducing its exposure to extreme weather events. The UEM team, led by Professor Salomão Bandeira, began the assessment in late March, which focuses on identifying practical options to use natural restoration or rehabilitation of vegetation to enhance critical ecosystem services that help protect Pemba and its residents. The assessment also includes a mapping of stakeholders and existing organizations broadly involved in activities related to green infrastructure rehabilitation, protection, and restoration in Pemba. CCAP will use the findings to inform interventions design and CCAP expects to complete the assessment in early May, after which it will disseminate relevant information to municipal authorities and other key partners.

INTEGRATED URBAN INFORMATION MANAGEMENT SYSTEM (SIGIU) ASSESSMENT IN PEMBA

During the reporting period, CCAP staff and municipal technicians analyzed the actual use of SIGIU in Pemba. The assessment revealed that currently five of 12 neighborhoods had trained data senders capable of providing data to the city managers and that only selected sectors within the municipality have used the platform. Assessment participants developed a targeted action plan that includes more frequent interactions with community data senders in all neighborhoods to help create a better environment for city managers to gather and use more geographically representative data. The plan also includes additional training to consolidate its use in the urbanization, finance, and solid waste management sectors and later expand to the education, health, and gender sectors. The use of SIGIU will help the municipality use data for decision making and will target resource allocation according to identified priorities.

KEY ACTIVITIES PLANNED FOR NEXT QUARTER

NATIONAL LAUNCH OF 3-2-1 ON DEMAND INFORMATION SYSTEM

CCAP has partnered with Vodacom to support the operationalization of one element of Mozambique's National Climate Change Mitigation and Adaptation Strategy for 2012-2025, which calls for using appropriate technologies to increase Mozambicans' access to information on climate change preparedness, response, and adaptive measures. Vodacom will host a toll-free, on demand system, developed by CCAP's partner HNI, which will make action-oriented climate change and disaster risk reduction information accessible via mobile phone. The launch event was postponed from mid-March to May as Vodacom required additional time to address technical configuration issues.

IMPLEMENTATION OF SOFT-ENGINEERING MANAGEMENT TOOLS IN NACALA

In the next quarter, CCAP will install the SIGIU data collection and management system in Nacala, provide GIS training to municipality technicians, and begin the process of implementing vulnerability maps into the city's digital cadaster. CCAP will assist the Municipality in developing vulnerability maps through the inclusive, participatory process the project used in Pemba and Quelimane during the next reporting period. CCAP intends to provide Nacala with three desktop computers to facilitate access to SIGIU and the digital cadaster management.

KICK-OFF RESILIENT HOUSING CONSTRUCTION IN PEMBA

CCAP and UN-Habitat started this activity in Quelimane and in the next reporting period will do the same in Pemba. The aim is to provide the local authorities and community members with necessary knowledge to build and demand houses that are more capable of withstanding the impact of extreme weather events. When carrying out the participatory process in Pemba, CCAP will use the experience gained in Quelimane to clarify siting, beneficiaries, and designs and will continue to keep community members at the core of the transparent and open process. Additionally, CCAP will work with national and provincial government entities, including FFH and DPOPWR, to ensure that they are equipped to promote the building techniques.

FINALIZATION OF THE DRR AND CCA COURSE

In the next quarter, CCAP through its partner UEM Faculty of Science will finalize the DRR and CCA course material development. These course materials will be peer reviewed by relevant specialists from lusophone universities to ensure that they meet international standards. After the peer review and necessary revisions are completed, UEM will conduct the training course and CCAP will work with UEM to transform it into an online course through CCAP's international partner TechChange.

EVALUATIONS/ASSESSMENTS UPDATES

- See the above updates on the rapid assessment of existing green infrastructure in Pemba.
- See the above updates on the SIGIU assessment in Pemba.

SNAPSHOT

Restoring mangroves to protect communities and livelihoods

To date, CCAP and community members have raised more than 50,000 seedlings that have restored more than eight hectares of mangroves along the Bons Sinais River



PHOTO: CCAP Project

Members of Icidua Community restoring mangroves along the Bons Sinais River in Quelimane Municipality

“...erosion and tidal waters are regularly inundating homes in the neighborhood.”

— Victor Pedro, one of the community members restoring mangrove in Quelimane city

As climate change raises sea levels and increases the frequency and severity of storms and flooding, coastal communities are becoming more vulnerable. The destruction of natural vegetation, such as mangroves and other natural barriers, exacerbates the risks to these communities.

In recent times, mangroves were harvested for fuel and building materials in the Mirazane and Icidua communities of Quelimane City, located on the Bons Sinais River about 20 kilometers from the Indian Ocean, exposing them to increased tidal forces, storm surges, and flooding.

More than offering protection from these events, mangroves are useful breeding places for prawns and fish, a very important source of funds and food for the same communities.

“Twenty years ago, easily I could catch fish and prawns to feed my family because the mangroves weren’t totally destroyed” remember Victor Pedro, one of the community members restoring mangroves in Icidua, adding that erosion and tidal waters are regularly inundating homes in the neighborhood.

In 2014 the Coastal City Adaptation Project (CCAP), funded by the US Agency for International Development in partnership with Quelimane Municipality, started working with communities and local leaders to restore mangroves in Icidua and other high-risk areas. CCAP informed local residents about the importance of protecting mangroves to reduce vulnerability to climate change risks.

“After meetings with Quelimane Municipality and CCAP representatives we agreed with the idea of restoring mangroves because we all want fish to come back and also to protect future generations against flooding and strong winds,” said Victor Pedro.

As result, community members are actively working to restore and protect mangroves. To date, with USAID’s support community members have raised more than 50,000 seedlings that have restored more than eight hectares of mangroves along the Bons Sinais River

Mozambique, January 2016

PROJECT PERFORMANCE INDICATORS

Indicators	Baseline	Total FY14	Total FY15	FY16 Q1	FY16 Q2	TOTAL FY16	TOTAL	LOP Target	% LOP	Indicator Activities
1. Numerical score on UNISDR's Local Government Self-Assessment Tool (LGSAT) (Impact)										The LGSAT baseline data collection was done in FY15 Q1 as a tool to help cities to better understand its ability to mitigate potential disasters and identify gaps, guide to city stakeholders to set priorities for achieving short- and long-term goals. This indicator CCAP will use to monitor the impact of its activities (follow-up assessments will be conducted at project mid-point and before the end of the project)
Pemba	1.83							TBD	0%	
Quelimane	1.97							TBD	0%	
2. Number of stakeholders with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance (Outcome, GCC required indicator 4.8.2-26) [GCC EGI 1.1-1 and GCC EGI 1.3-1]	0	1	176	77	63	140	317	5 050	6%	To date CCAP has reached 317 individuals who demonstrated their capacity to adapt to the impact of extreme weather events by implementing community protection activities directly in the field with supervision of community based organizations in Icidua and Mirazane neighbourhoods in Quelimane and through pre and post-test after an training. More people have demonstrated their capacity to implement the EMMP procedures for solid waste management, green infrastructure, latrines construction and water catchment system management; also seven (7) individuals demonstrated their capacity using the Vulnerability Mapping to improve the digital Cadastre in the Municipality and put the citizen aware about their plots in vulnerable areas, and 9 (nine) individuals used climate information in their decision maker to improve resilience in the municipal area.
3. Number of laws, policies, strategies, plans, agreements, or regulations addressing climate change officially proposed, adopted, or implemented as a result of USG assistance (Outcome, F Indicator 4.8.2-28) [GCC EGI 1.2-1 and GCC EGI 1.2-2]	0	0	15	0	1	0	16	100	16%	CCAP supported Municipalities to integrate of CCA and DRR issues into Municipalities strategies, plans and agreements and submission to municipality assembly to approve the documents to be used by different stakeholders CCAP signed a agreement with Nacala Municipality.
4. Number of institutions with improved capacity to assess/address climate change risks issues as result of USG assistance (Outcome, F Indicator 4.8.2-14) [GCC EGI 1-3]	0	8	11	0	0	0	19	20	95%	Up to date CCAP worked with 19 different local institutions, on Climate Change and Disaster Risk Reduction issues and they improved they capacity engaging with CCAP to improve coastal communities to survive, minimize losses, and quickly recover from increasingly more frequent and more intense weather events working together to replace and recover the green infrastructures in their communities as a group.
5. Number of CCA or DRR tools, technologies and methodologies developed, tested and/or adopted (Outcome) [GCC EGI 1.1-3]	0	6	16	0	0	0	22	10	220%	CCAP developed, tested and are in process to implement the Urban Information System Management (SIGIU) and Disaster Information System Management (SIGIC) platform as a tools for both municipalities and at national level and create tools to be used for data collection and reporting for decision makers. CCAP also are working with Cadastre department to use de vulnerability mapping in the digital cadastre process.

Indicators	Baseline	Total FY14	Total FY15	FY16 Q1	FY16 Q2	TOTAL FY16	TOTAL	LOP Target	% LOP	Indicator Activities
7. Number of person hours of training completed in climate change as a result of USG assistance (Output, F Indicator 4.8.2-29)	0	1 251	5 412	6 788	1 680	8 468	15 131	9 000	168%	CCAP conducted trainings on integrated Disaster Information System Management (SIGIC) for all INGC provincial delegations and for all CLGRCs in the areas considered at risk for rain season 2015/2016, and capacity building for integration of Vulnerability mapping in the cadastre in Quelimane, trainings for all CLGRCs in Quelimane city also CCAP in partnership with ACCRA and UEM conducted the Local adaptation trainings in Pemba and Quelimane. For FY16 Q2 CCAP conducted an EMMP training for partners in 4 different components (solid waste management, green infrastructure implementation, latrines construction requisites and water catchment management).
8. Number of proposals submitted for CCA or DRR projects (Output)	0	1	2	0	0	0	3	10	30%	To date CCAP supported both Municipalities in the design and submission of 3 proposals
9. Area (hectares) impacted by at least one CCA or DRR intervention implemented with citizen input per year (Outcome)	0	0	1 101	0	0	0	1 101	1 400	79%	CCAP supported the Municipalities in implementation of different activities (SIGIU, SIGIC, Mangrove reforestation, Vulnerability Mapping, etc.) and impacted at least of 1 100 hectares in both municipalities
10. Number of people with increased knowledge of climate change impacts and adaptation strategies as result of USG assistance (Outcome) [GCC EG11.3-2]	0	0	55	41	51	92	147	500	29%	Municipal staff from Pemba and Quelimane trained by CCAP staff are using the knowledge obtained in the training to implement the digital cadastre in their day by day work. In addition during the EMMP training CCAP based on the pre and post testes increase the number of people with increased knowledge on CCA and DRR components.
11. Number of person-contact hours of information disseminated about climate change vulnerabilities and adaptive options (Output)	0	278 110	60 570	154 323	18	154 340	493 020	3 000 000	16%	Through different channels (Radio, TV, Facebook, banners, technical briefs, twitter, Instagram, etc.) CCAP disseminated CCA and DRR information at different levels and for different audiences
12. Proportion of CCA or DRR interventions implemented with community contributions (Outcome)	0	0%	100%	0%	0%	0%	100%	20%	500%	100% of interventions implemented in the communities was with their direct involvement in the activities
13. Proportion of individuals engaged in CCAP activities who are youth (Output)	0	16%	28%	19%	26%	22%	23%	20%	116%	23% of people participated in trainings and technical assistance was youth (people from 16 to 29 years old).